Name:

Date:

Imagine a large cube made up from 27 small red cubes. Imagine dipping the large cube into a pot of yellow paint so that the whole outer surface is covered, and then breaking the cube up into its small cubes.  
  
How many of the small cubes will have yellow paint on 3 faces? How many of the small cubes will have paint on 2 faces? On 1 faces? On 0 faces?

Now, rethink the problem with 64 small cubes (4 x 4 x 4). . .or 125 cubes (5 x 5 x 5). . . or ***n* x *n* x *n*** cubes*?*